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(54) MULTIPURPOSE PORTABLE TELEPHONE SET

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain the multipurpose portable telephone set in which a function can be set for obtaining living body information on GSR indicating the mental state of a persona bodily fat value indicating the degree of obesity of the person isetc.in addition to the original functions of the portable telephone set.

SOLUTION: This multipurpose portable telephone set is equipped with a malfunction preventive mode cancel part which cancels a malfunction preventive mode 30 set in order to prevent operation switches 26 of the portable telephone set from malfunctioning by gripping a grip sensor part 60 provided at a predetermined position by a hand and a detection part 40 which detects living body information on the person who grips the grip sensor part 60 by the hand; when the malfunction preventive mode is set with a mode selection switch 27the malfunction preventive mode is canceled by gripping the grip sensor part 60 by the hand and when a mode wherein the living body information is detected is setthe living body information is detected by gripping the grip sensor part 60 by hand.

CLAIMS

[Claim(s)]

[Claim 1]When it has the following and said malfunction prevention mode is set up by a mode selection switchA portable telephone which said malfunction prevention mode is canceled by grasping said grip sensor part by handand is characterized by detecting said biological information by grasping said grip sensor part by hand when the mode in which said mode selection switch detects said biological

information is set up.
A malfunction prevention mode release part which cancels malfunction prevention mode set up for prevention from malfunction of an operation switch of said portable telephone by grasping by hand a grip sensor part provided in a position defined beforehand.
A primary detecting element which detects biological information of a person who grasped said grip sensor part by hand by grasping said grip sensor part by hand.

[Claim 2]The multipurpose portable telephone according to claim 1 detecting and searching for micro current which flows into a human body by making said biological information into a body fat value which shows GSR and/or an obesity situation of a human body which show people's mental conditionand grasping said grip sensor part by hand.
[Claim 3]The multipurpose portable telephone according to claim 1 or 2wherein said grip sensor part consists of an electrode of a couple to which potential provided in left and right laterals of a portable telephone body is given.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention]This invention relates to the multipurpose portable telephone which enabled setting out of the function to acquire biological informationsuch as a body fat value which shows the corpulence degree of GSR and the human body in which people's mental condition is shown especially in addition to the original function of a cellular phoneabout a portable telephone.
[0002]
[Description of the Prior Art]When putting into a bagthe backetc.carrying in the conventional portable telephone and making it it in the mail arrival waiting state (power supply ON)There is a possibility that other housed articles and operation switches which have been put into a bagthe backetc. may contactand a portable telephone may malfunctionand in order to prevent thissome are provided with the malfunction preventing function.
[0003]Drawing 2 shows the front view of the portable telephone of the conventional technology provided with the malfunction preventing function. When setting malfunction prevention mode as the portable telephone 10It can carry out by choosing malfunction prevention mode by operating the mode selection switch 15A of the operation switch part 15It can ** the touch sensor 11 and hand of a couple which were provided in the side of the portable telephone 10 contactingand canceling malfunction prevention mode by grasping the portable telephone 10 by hand.
[0004]
[Problem(s) to be Solved by the Invention]Howeverthere were the following

problems in the conventional portable telephone 10.
[0005]As described abovein the conventional portable telephone 10can set up the modessuch as malfunction prevention modeby operating the mode switch 15Abut. Since the portable telephone 10 has many opportunities to always put on personal appearanceor possess and use naturallyit is in the tendency for the function on everyday life to also be required in addition to the original function of a portable telephone.
[0006]Since this conventional portable telephone 10 is in the tendency of a miniaturization further and the input of the information from people is restricted to the operation switch part 15 or the touch sensor 11For exampleeven if it is going to carry out setting out which acquires biological informationsuch as a body fat value which shows the corpulence degree of GSR and the human body in which people's mental condition is shownthere is also no room of the setting-out space between sensorsand it was thought that setting out of such a function was impossible.
[0007]This invention was made in view of the aboveand is ****. The purpose is to provide the multipurpose portable telephone which enabled setting out of the function to acquire biological informationsuch as a body fat value which shows the corpulence degree of GSR and the human body in which people's mental condition is shown in addition to the original function of **.

[0008]
[Means for Solving the Problem]Thena multipurpose portable telephone of this inventionBy grasping by hand a grip sensor part provided in a position defined beforehand in a portable telephoneBy grasping by hand a malfunction prevention mode release part which cancels malfunction prevention mode set up for prevention from malfunction of an operation switch of said portable telephoneand said grip sensor partWhen it has a primary detecting element which detects biological information of a person who grasped said grip sensor part by hand and said malfunction prevention mode is set up by a mode selection switchWhen the mode in which said malfunction prevention mode is canceled and said mode selection switch detects said biological information by grasping said grip sensor part by hand is set upsaid biological information is detected by grasping said grip sensor part by hand.
[0009]Said biological information is made into a body fat value which shows GSR and/or an obesity situation of a human body which show people's mental conditionand micro current which flows into a human body is detected and searched for by grasping said grip sensor part by hand.
[0010]Said grip sensor part consists of an electrode of a couple to which potential provided in left and right laterals of a portable telephone body is given.
[0011]
[Embodiment of the Invention]Hereafteran embodiment of the invention is described.
[0012]Drawing 1 shows the side view for explaining the entire structure of the

multipurpose portable telephone about this invention. A multipurpose portable telephone comprises the portable telephone part 20the malfunction prevention mode release part 30the GSR primary detecting element 40 that detects GSR of biological informationand the body fat primary detecting element 50 which detects the body fat value of biological information.
[0013]The portable telephone part 20 The antenna 21the wireless section 22and the loudspeaker 23The microphone 24the control section 25the operation switch 26and the mode selection switch 27It comprises the indicator 28 and the selecting part 29the control section 25 outputs a control signal to the wireless section 22 with the input signal from the operation switch 26and the telephone call with the loudspeaker 23 and the microphone 24 is transmitted and received via the antenna 21 in the wireless section 22. By the mode selection switch 27the mode select of the malfunction prevention mode release part 30the GSR primary detecting element 40and the body fat primary detecting element 50 is possible. The output signal from that as which the selecting part 29 carried out the selection operationand chose the malfunction prevention mode release part 30the GSR primary detecting element 40and the body fat primary detecting element 50 by the mode select of the mode selection switch 27 is inputted into the control section 25. The indicator 28 displays the variety-of-information signal from the control section 25.
[0014]The malfunction prevention mode release part 30 detects the micro current of a human body by grasping the multipurpose portable telephone about this invention by handIt is what cancels the malfunction prevention mode set up by the mode selection switch 27 for the prevention from malfunction of the operation switch 26The grip sensor part 60 which has the electrodes A and B of the couple provided in the lateral portion of the multipurpose portable telephone about this inventionIt comprises the feed voltage part 32 of a direct current to the grip sensor part 60 to which the series connection of DC power supply 32A and the high resistance 32B is carried outthe amplifier 33 linked to the switch part 31 and the feed voltage part 32and the judgment part 36.
[0015]When malfunction prevention mode is set up by the mode selection switch 27 and the switch part 31 is set to ON by the selecting part 29If the grip sensor part 60 of a multipurpose portable telephone body is grasped by handmicro current will flow with the voltage to which it grasped with the human bodythe sensor part 60 contacted and graspedand between the sensor parts 60 was supplied by the feed voltage part 32. The amplifier 33 amplifies the voltage by this micro currentand outputs it to the judgment part 36. The judgment part 36 judges that the main part is grasped by the inputted level of this signala decision result is outputted to the control section 25and malfunction prevention mode is canceled.
[0016]Thereforea portable telephone can be prevented from other housed articles and operation switches 26 which have been put into a bagthe backetc. contactingand malfunctioning while putting incarrying and making it a bagthe backetc. in the mail arrival waiting state (power supply ON).
[0017]In the time of the stress which human being was impressed with the time of

usualor was surprisedskin resistance values differ and a skin resistance value is temporarily changed at the time of stress. Change of such a moral situation is detectable as a GSR (Galvanic Skin Responce) signal.
[0018]The GSR primary detecting element 40 detects a GSR signaland The grip sensor part 60It comprises the feed voltage part 42 of a direct current to the grip sensor part 60 to which the series connection of DC power supply 42A and the high resistance 42B is carried outthe amplifier 43 connected to the switch part 41 and the feed voltage part 42 via the capacitor 42CBPF(band pass filter)44and the judgment part 46. AC power supply can be instead used for DC power supply 42A.
[0019]When GSR detection mode is set up by the mode selection switch 27 and the switch part 41 is set to ON by the selecting part 29If the grip sensor part 60 of a multipurpose portable telephone body is grasped by handmicro current will flow with the voltage to which it grasped with the human bodythe sensor part 60 contacted and graspedand between the sensor parts 60 was supplied by the feed voltage part 42but. When people's grasped moral situation is changeda skin resistance value changes temporarily and the micro current between the grip sensor parts 60 is changed.
[0020]Change of this micro current is inputted into the amplifier 43 via the capacitor 42C as a GSR signal. It is amplified by the amplifier 43a noise component is removed by BPF44and this input signal is inputted into the judgment part 46. The judgment part 46 judges the level of a moral situation with the signal level from BPF44 inputteda decision result is outputted to the control section 25and the level of a moral situation is displayed on the indicator 28 by the control section 25.
[0021]Thereforeother persons ask the display of the level of such a moral situation to those who have grasped the main partfor exampleand it can be used also as a game of lie discovery.
[0022]The body fat primary detecting element 50 detects the body fat value which shows an obesity situationand The grip sensor part 60It comprises the feed voltage part 52 of the exchange to the grip sensor part 60 to which the series connection of AC power supply 52A and the high resistance 52B is carried outthe amplifier 53 linked to the switch part 51 and the feed voltage part 52BPF54the detection section 55the operation part 56and the set part 57. DC power supply can be instead used for AC power supply 52A.
[0023]When body fat detection mode is set up by the mode selection switch 27 and the switch part 51 is set to ON by the selecting part 29Micro current flows with the volts alternating current to which it grasped when the electrodes A and B of the grip sensor part 60 provided in the right and left of the multipurpose portable telephone body were pressed down and grasped by the hand on either siderespectivelyand between the sensor parts 60 was supplied by the feed voltage part 52.
[0024]This micro current is inputted into the amplifier 53 as a body fat signal. It is amplified by the amplifier 53 and a noise component is removed by BPF54and this input signal is inputted into the detection section 55is detectedand turns into an

analog signal. The operation part 56 calculates a body fat value from the value of this inputted analog signaland people's weight and the value of height which have grasped the main part by which the setting input was beforehand carried out to the set part 57 with the operation switch 26outputs the result of an operation to the control section 25and a body fat value is displayed on the indicator 28 by the control section 25. Expressing as percent can also express the display of a body fat value as a stage level.

[0025]Thereforeusing it for the everyday health care as a simple body-fat scale also measures the display of such a body fat value mutuallyand it can use it in game.

[0026]Although the grip sensor part 60 described the electrodes A and B of the couple provided in the lateral portion of the main partit can provide two or more electrodeswithout being limited to this.

[0027]As stated aboveabove-mentioned working example by the grip sensor part 60 which has an electrode of the couple provided in the lateral portion of the main part. Release in the malfunction prevention mode set up for the prevention from malfunction of an operation switch even if the space of the portable telephone body was restrictedThe body fat value which shows detection of GSR which shows people's mental conditionand the obesity situation of a human body can be detected easilyand setting out of the function to acquire such biological information in addition to the original function of a cellular phone can be enabled by compact structure.

[0028]

[Effect of the Invention]The multipurpose portable telephone of this invention by grasping by hand the grip sensor part provided in the position defined beforehand in the portable telephoneBy grasping by hand the malfunction prevention mode release part which cancels the malfunction prevention mode set up for the prevention from malfunction of the operation switch of said portable telephoneand said grip sensor partWhen it has a primary detecting element which detects the biological information of the person who grasped said grip sensor part by hand and said malfunction prevention mode is set up by a mode selection switchWhen the mode in which said malfunction prevention mode is canceled and said mode selection switch detects said biological information by grasping said grip sensor part by hand is set upSince said biological information was detected by grasping said grip sensor part by handthe function to acquire biological informationsuch as a body fat value which shows the corpulence degree of GSR and the human body in which people's mental condition is shown in addition to the original function of a cellular phonewas able to be easily set up by compact structure.

[0029]In order to detect and search for the micro current which flows into a human body by making said biological information into the body fat value which shows GSR and/or the obesity situation of a human body which show people's mental conditionand grasping said grip sensor part by handWhile being able to acquire easily the biological information stuck to everyday lifeit can be used also as a scientific game.

[0030]Said grip sensor part can acquire various kinds of biological information from one grip sensor parteven if the space of the portable telephone body is restrictedsince it consists of an electrode of the couple to which the potential provided in the left and right laterals of the portable telephone body is given.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1]The side view for explaining the entire structure of the multipurpose portable telephone about this invention is shown.
[Drawing 2]The front view of the portable telephone of the conventional technology provided with the malfunction preventing function is shown.
[Description of Notations]
10 Portable telephone
11 Touch sensor
1527 operation switch parts
15A Mode selection switch
20 Portable telephone part
22 Wireless section
25 Control section
25 Operation switch
28 Indicator
29 Selecting part
30 Malfunction prevention mode release part
314151 switch parts
3242and 52 Feed voltage part
3343and 53 Amplifier
36 and 46 Judgment part
40 GSR primary detecting element
4454 BPF
50 Body fat primary detecting element
55 Detection section
56 Operation part
57 Set part
60 Grip sensor part